NON-PUBLIC?: N
ACCESSION #: 8901200394
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Maine Yankee Atomic Power Company PAGE: 1 of 2

DOCKET NUMBER: 05000309

TITLE: Plant trip on High Heater Drain Receiver Tank Level
EVENT DATE: 12/16/88 LER #: 88-010-00 REPORT DATE: 01/16/89

OPERATING MODE: 7 POWER LEVEL: 018

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: David E. Collamore, Nuclear Safety Engineer TELEPHONE: 207-882-6321

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On 16 December, 1988, during the initial startup from refueling outage, a reactor trip occurred on Loss of Load due to turbine trip. The main turbine auto trip was caused by high level in the Heater Drain Receiver Tank (HDT).

HDT pumps and normal level control valve were not yet in service.
HDT level was being limited by unexpected leakage from a flange on an incoming line from a feedwater heater. When the flange was isolated to stop the leakage, HDT level began increasing. The high level dump valve failed to open on high level, and level further increased to the turbine trip setpoint.

Pneumatic controls for the high level dump valve were found not to be properly aligned, preventing valve opening. Bolting on the leaking flange was found to be improperly torqued. A Heater Drain system alignment, including pneumatic controls, was performed prior to restart. The flange bolts were properly torqued prior to restart.

END OF ABSTRACT

On 16 December, 1988, the initial plant startup from the cycle 10/11 refueling outage was in progress. At 0958, the reactor (RCT) was at 18 percent reactor power, increasing, when a reactor trip occurred on loss of turbine load. The Loss of Load trip occurs automatically when the turbine (TRB) trips at or above 15 percent reactor power. Loss of Load trips occurred on all reactor protective system (JC) channels, and all reactor trip circuit breakers (52) opened within specified time limits.

Emergency Core Cooling System (BQ)(BP)(BE) and Emergency Feedwater were not required and did I not initiate. No technical specification limits or safety limits were exceeded. Pressurizer power operated relief valves and code safety valves (RV) were not challenged. Steam Generator code safety valves (RV) were not challenged.

The main turbine auto trip was caused by high level in the Heater Drain Receiver Tank (HDT)(TK). The turbine trip is provided to prevent water induction into the Low Pressure turbine (LP) blading due to overfilling of the HDT. Tank pressure had not yet reached permissive setpoint to place HDT pumps (P) and normal level control valve (LCV) in service. HDT level was being limited by leakage out of a flange on the incoming line from a feedwater heater (HX) level control valve. A manual valve (ISV) was shut between the HDT and the flange to isolate the leak. With the leak isolated, HDT level increased, the high level dump valve (LCV) failed to open, and level further increased to the turbine trip setpoint.

Subsequent investigation showed a pneumatic control system valve for the high level dump valve incorrectly positioned, preventing dump valve opening. Bolts on the leaking flange were found to be improperly torqued, causing the leakage.

Prior to restart, the flange bolts were properly torqued, and a Heater Drain system (SJ) alignment was performed. The HDT High Level Dump Valve was subsequently stroke tested with satisfactory results. Additional guidance for Heater Drain system alignment, and a functional test of the High Level Dump Valve were added to the plant startup procedure.

MaineYankee
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10 CFR 50.731

January 16, 1989
MN-89-04 GDW-89-15

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

References: (a) License No. DPR-36 (Docket No. 50-309)

Subject: Maine Yankee Licensee Event Report 88-010-00 - Plant Trip on High Heater Drain Receiver Tank Level

Gentlemen:

Please find enclosed Maine Yankee Licensee Event Report 88-010-00. This report is submitted in accordance with the requirements of 10 CFR 50.73(a)(2)(iv).

Very truly yours,

MAINE YANKEE

G. D. Whittier, Manager
Nuclear Engineering and Licensing

GDW/bjp

Enclosure

cc: Mr. Richard H. Wessman
Mr. William T. Russell
Mr. Pat Sears
Mr. Cornelius F. Holden
American Nuclear Insurers

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